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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,002	11/07/2001	Jozef Herman Peter Bastiaens	08CN07467-1	5002

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EXAMINER

LEE, RIP A

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 09/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/683,002

Applicant(s)

BASTIAENS ET AL.

Examiner

Rip A. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 14, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-21 and 23-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-13, 14-21, 23-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This office action follows a response filed July 14, 2003. Applicants have amended claims 1, 5, 21, and 25. In particular, independent claims were amended to limit the polyamide component to a mixture of nylon 6 and nylon 6,6. Claims 3 and 4 were canceled, and new claims 31-33 were added.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 31 and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims are drawn to a thermoplastic composition comprising certain components as well as "a product of a reaction of polyphenylene ether, polyamide and compatibilizing agent." It appears that a blend of two materials is being claimed, and according to the specification, this lies beyond the scope of the invention.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1, 2, 5-7, 10-13, 16, 17, 19-21, and 24-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 2001/0031831 to Miyoshi *et al.* in view of U.S. Patent No. 4,011,200 to Yonemitsu *et al.* for the same reasons set forth in the previous office action (see Paper No. 8).

6. Claims 1, 2, 5-7, 10, 16, 17, 19, 21, 26, 27, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 924 261 to Koevoets *et al.* in view of Yonemitsu *et al.* for the same reasons set forth in the previous office action.

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7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyoshi *et al.* in view of Yonemitsu *et al.* and further in view of U.S. Patent No. 6,528,572 to Patel *et al.* (see previous office action for details).

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyoshi *et al.* in view of Yonemitsu *et al.* and further in view of U.S. Patent No. 6,277,907 to Gelbin (see previous office action for details).

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyoshi *et al.* in view of Yonemitsu *et al.* and further in view of U.S. Patent No. 6,221,283 to Dharmarajan *et al.* (see previous office action for details).

Response to Arguments

10. Applicants traverse the rejection of claims under 35 U.S.C. 103(a) as being unpatentable over U.S. 2001/0031831 to Miyoshi *et al.* in view of U.S. Patent No. 4,011,200 to Yonemitsu *et al.* Applicant's arguments have been considered fully, but they are not persuasive.

Applicants submit that Miyoshi *et al.* teaches in the examples and in the specification that the ethylene/ α -olefin copolymer is modified with at least one α,β -unsaturated diacid or derivative thereof, implying that such materials are far removed from the claimed impact modifier polymers. However, this is not the complete story. In paragraph [0054], Miyoshi *et al.* prescribes use of ethylene/ α -olefin copolymer and/or modified ethylene/ α -olefin copolymer. Clearly, an option is provided, and in view of the fact that both SEBS and SEP copolymers are exemplified in Table 1, it is maintained that the skilled artisan would have found it obvious to use these materials.

Despite the fact that the prior art does not teach specifically the use of both types of impact modifier, the test for *obviousness* is not whether the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). It is maintained that one having ordinary skill in the art would find it obvious to use a combination of SEBS and SEP impact modifier since each member of the combination was shown individually to perform the same chemical function, and the skilled artisan would have expected such a combination to work.

Applicants rebut this notion, arguing that it is not obvious to use the claimed components due to complex multiphasic nature of the composition. Applicants also appear to rely on this fact to claim that use of a PPE copolymer containing 2,6-dimethyl-1,4-phenylene units and 2,3,6-trimethyl-1,4-phenylene units would not obvious over the prior art (page 11, line 19).

First, the inventors claim that use of said PPE copolymer is preferred (paragraph [0038]) because it is well known in the art that incorporation of the 2,3,6-comonomer enhances oxidative and thermal stability of the polymer as well as improving processing and moldability of the resin. Such advantages are illustrated in the secondary reference of Yonemitsu *et al.* Secondly, the multiphasic nature of the polymer composition would not deter the skilled artisan from arriving at the claimed components because the prior art shows clearly that SEBS and SEP copolymers are compatible with PPE copolymers. The inventors would not have used them as compatibilizing agents had the copolymers not exhibited some compatibility with the base resin.

What Applicants have not shown adequately, then, is why the skilled artisan would not find it obvious to arrive at the claimed invention in view of the teachings of the prior art.

11. Applicants traverse the rejection of claims under 35 U.S.C. 103(a) as being unpatentable over EP 0 924 261 to Koevoets *et al.* in view of Yonemitsu *et al.*

Applicants submit that the preferred impact copolymer described in Koevoets *et al.* contains moieties that are reactive with the polyamide resin. This is correct, but it does not detract from the fact that use of the combination of SEBS and SEP copolymers (in addition to the modified copolymers described by Applicants) are fully disclosed in the table on page 7.

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Applicants also indicate that the references do not teach or suggest use of the combination of nylon 6 and nylon 6,6. Both nylons are fully disclosed in the reference on page 2, line 37, and mixtures of polyamides are useful for compositions of the invention (page 2, line 41). Based on these findings, it is maintained that one having ordinary skill in the art would have found it obvious to arrive at the combination of nylon 6 and nylon 6,6, especially since these two species are preferred materials among a limited selection of more esoteric nylons.

12. Applicants traverse the rejection of claims under 35 U.S.C. 103(a) as being unpatentable over Patel *et al.* and Gelbin.

It is not clear from Applicants arguments why it is not obvious to use these particular claimed materials (vapor grown fiber, carbon nanotubes, and pentaerythritol *tetrakis*(laurylthiopropionate)) in the composition described in Miyoshi *et al.*

13. In view of the discussion above, the rejection of record has not been withdrawn.

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Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7064. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

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September 22, 2003



**D. R. WILSON
PRIMARY EXAMINER**